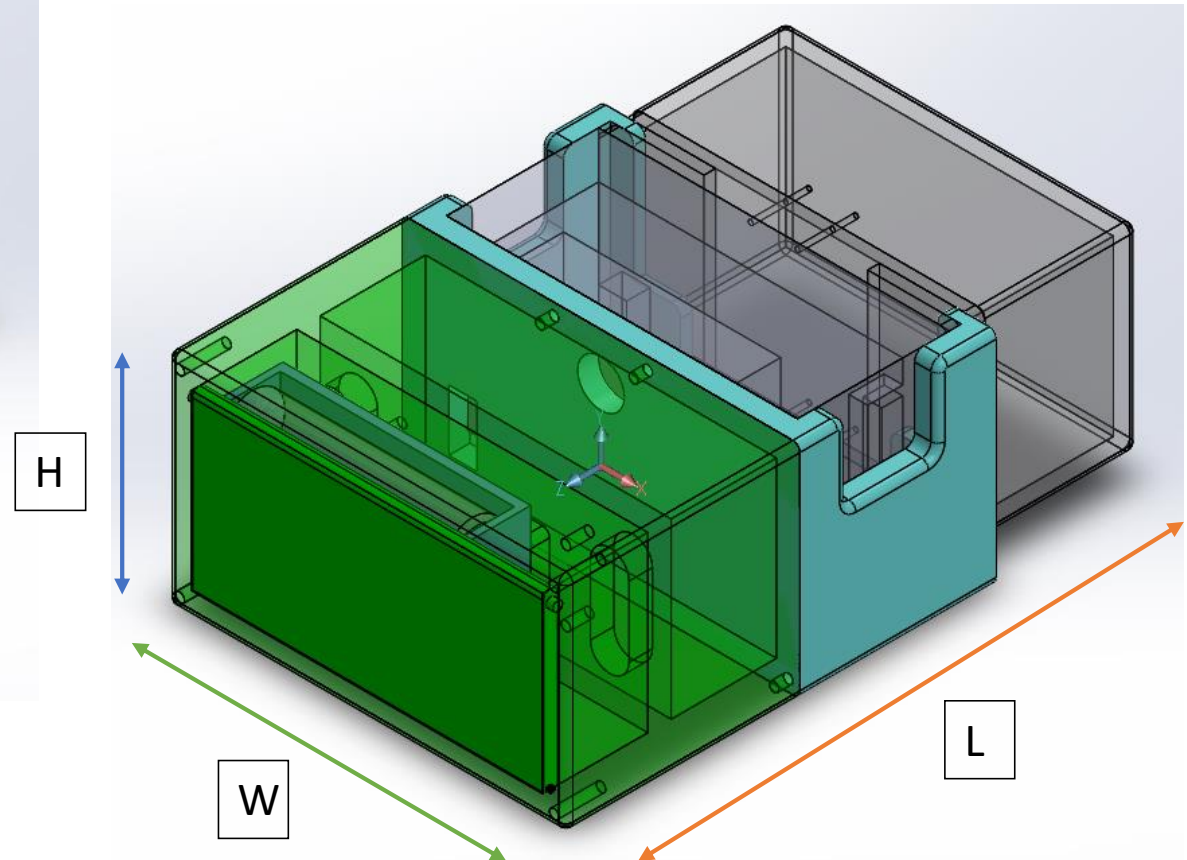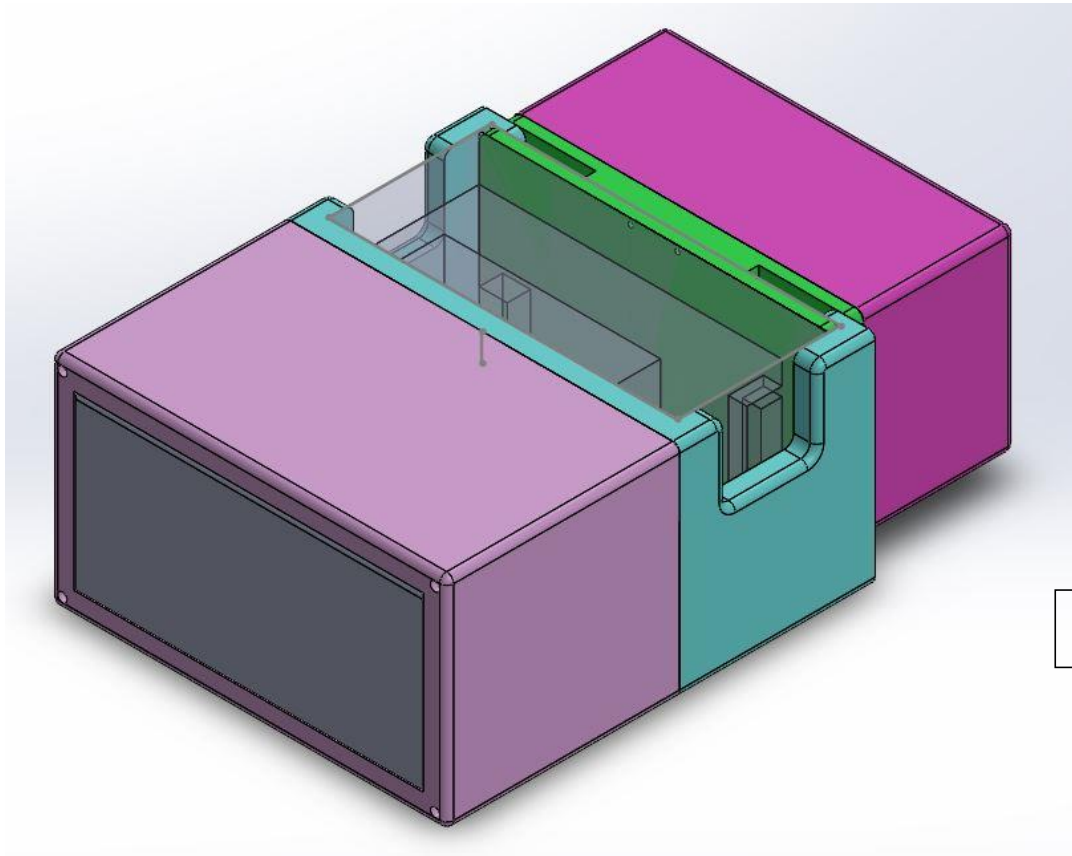# Travel PALS Prototype

Done by: George

Yun Fai
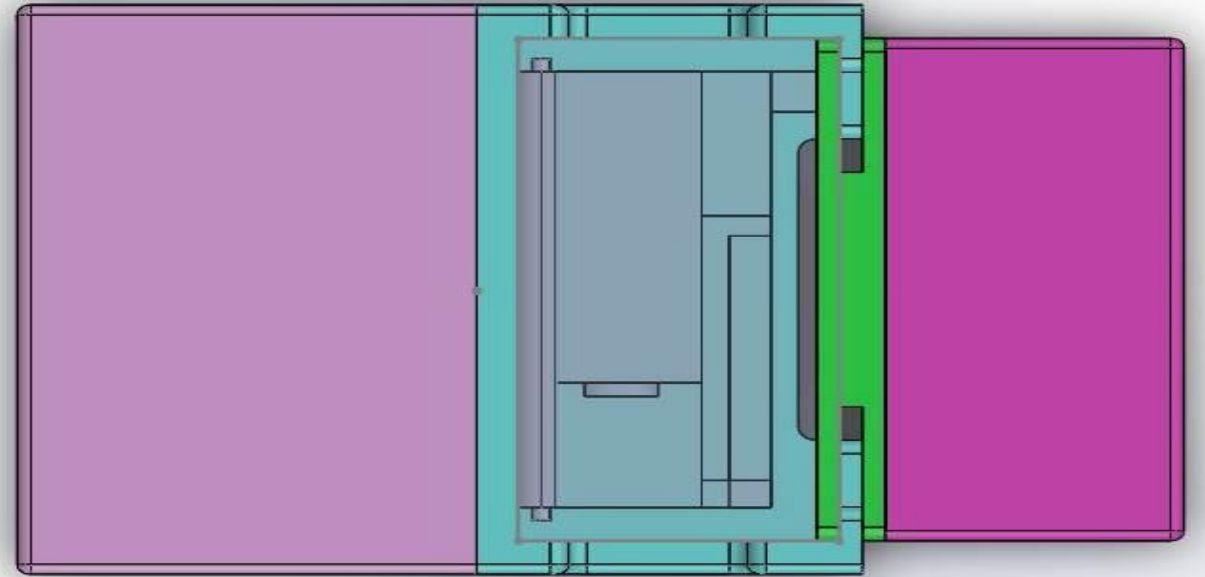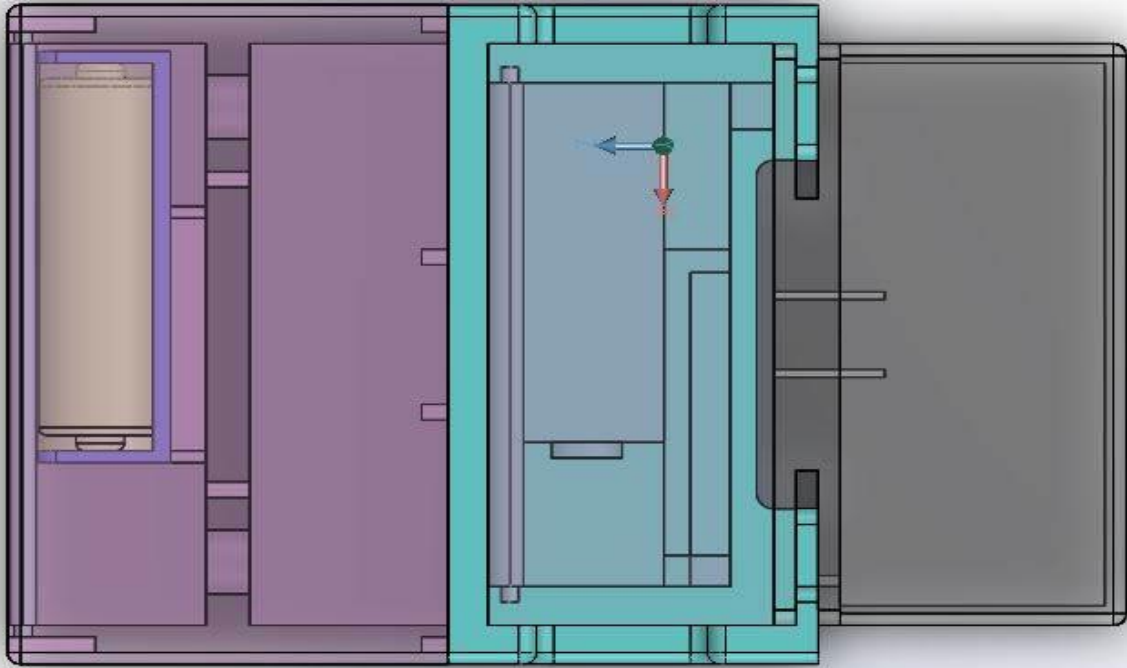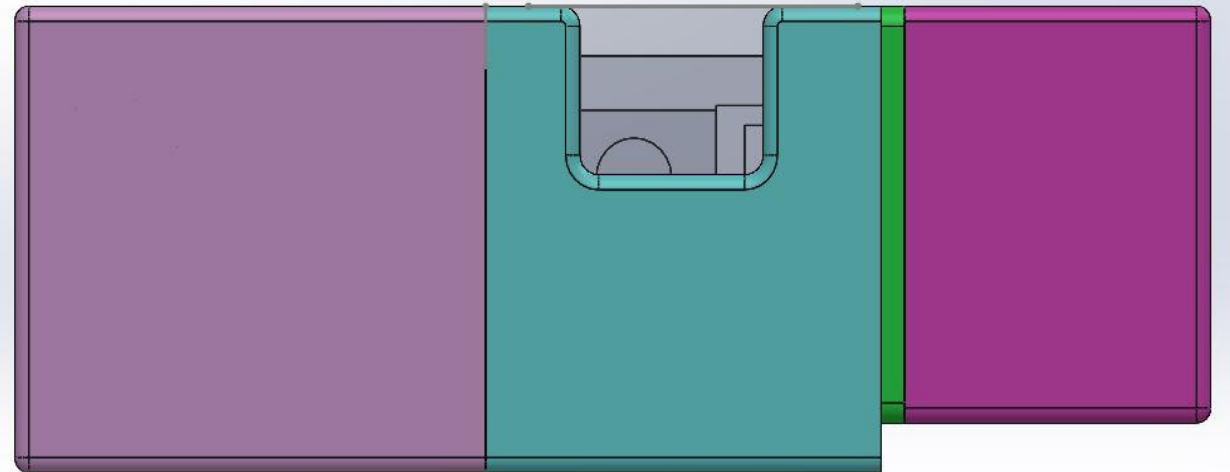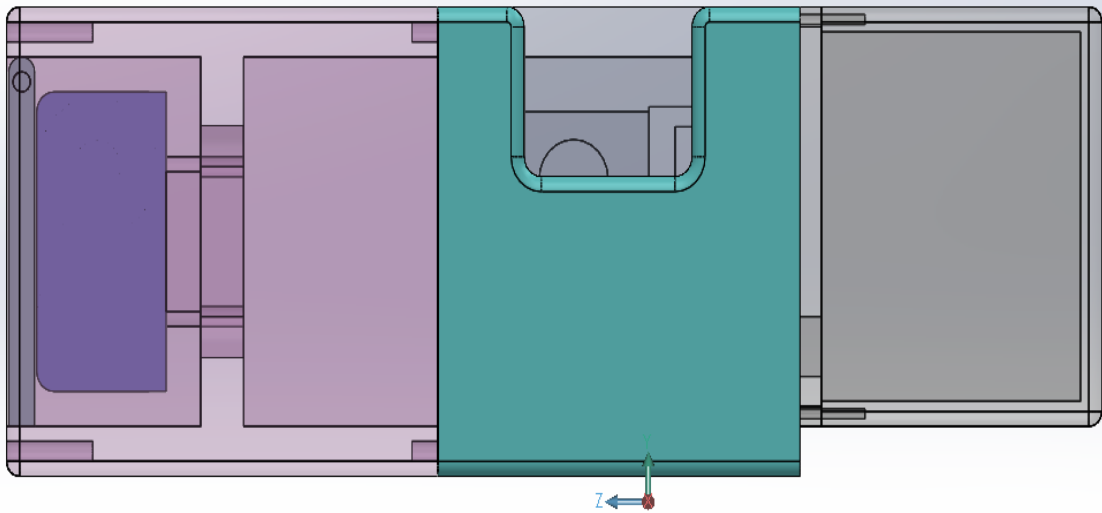
Valerie

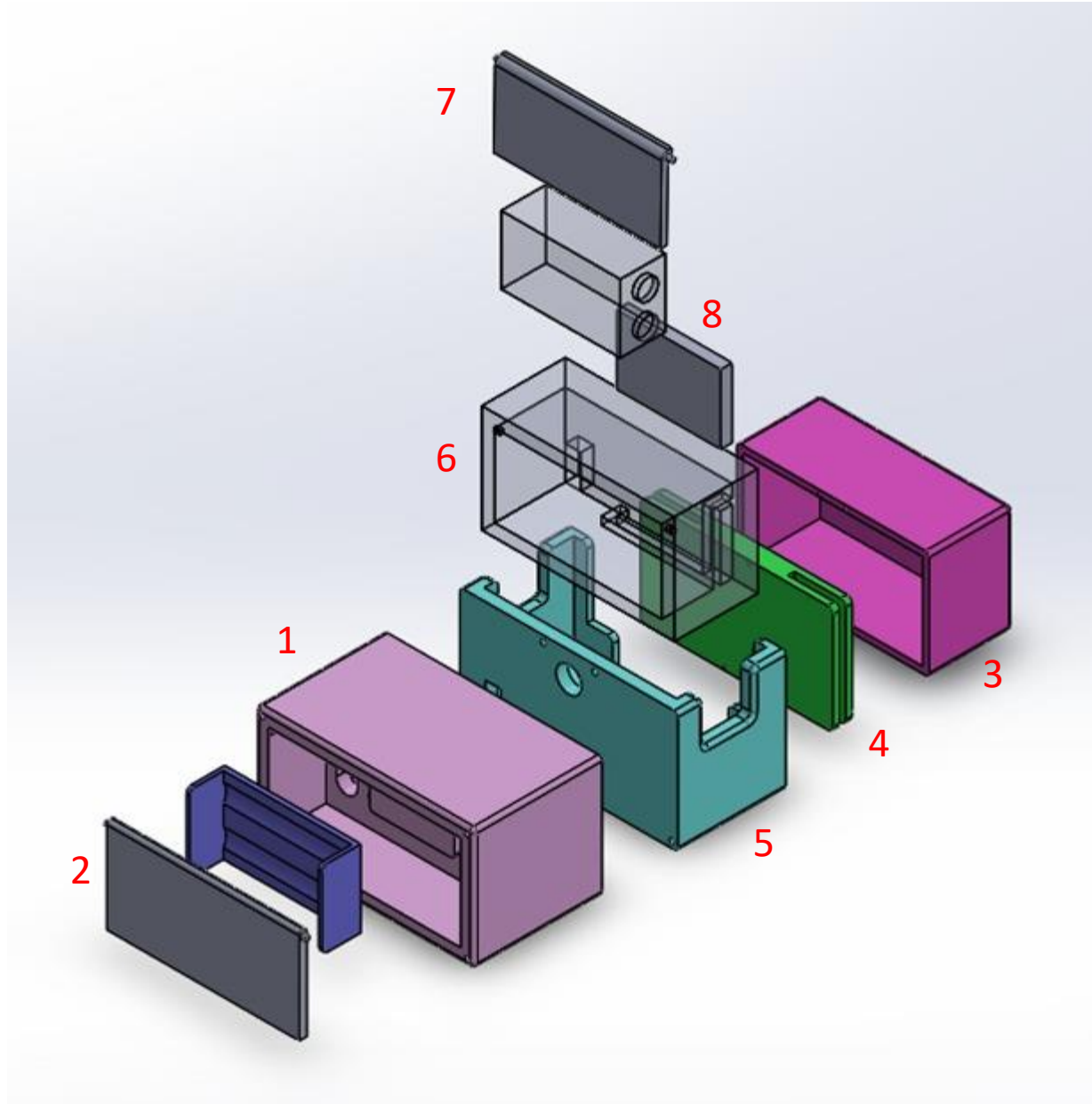**Overall Assembly**

127mm (L) X 85mm (W) X 47mm (H)

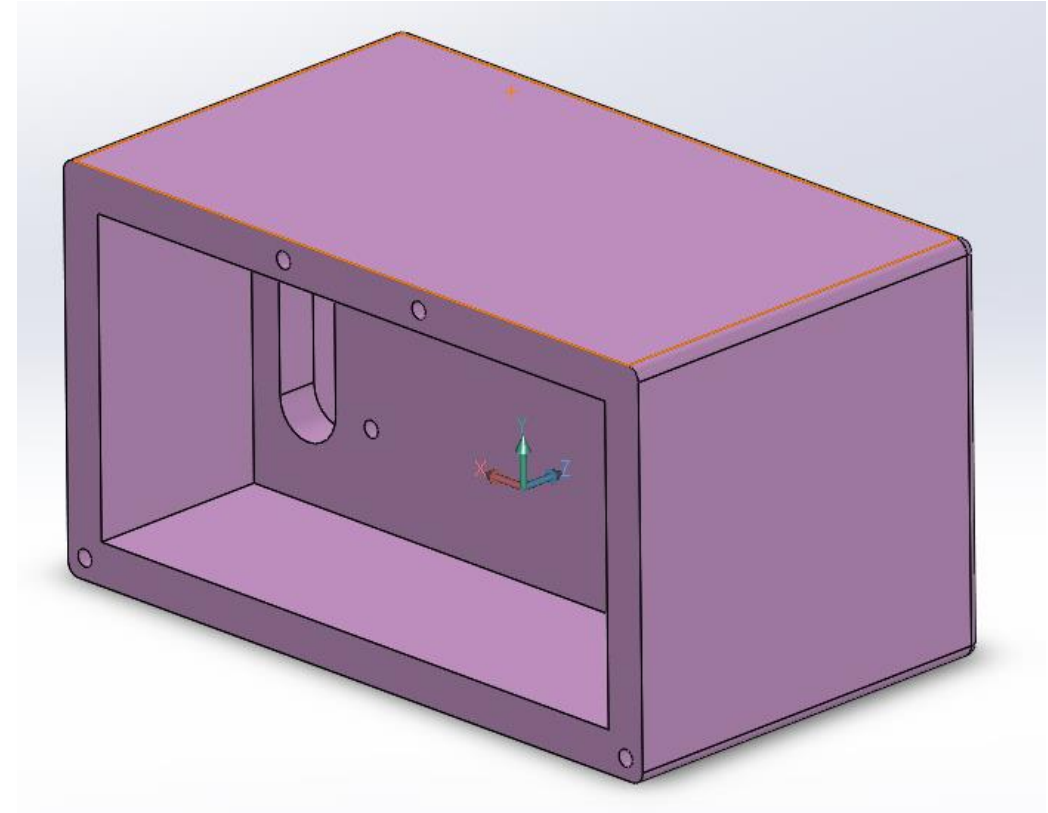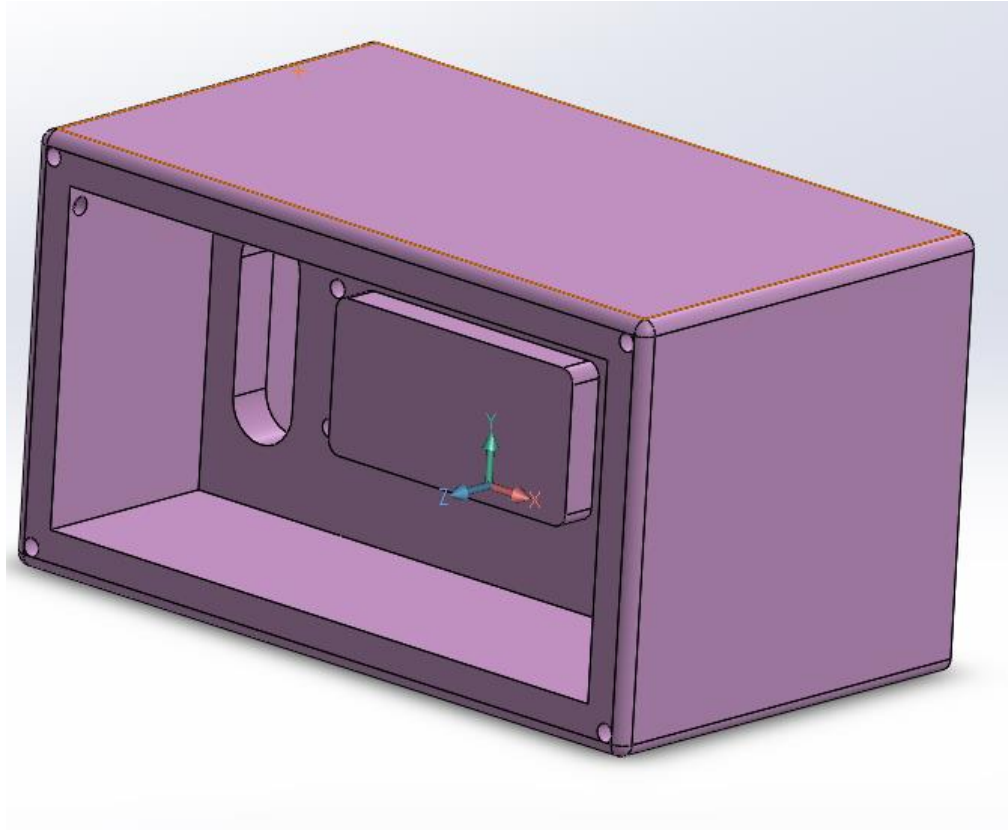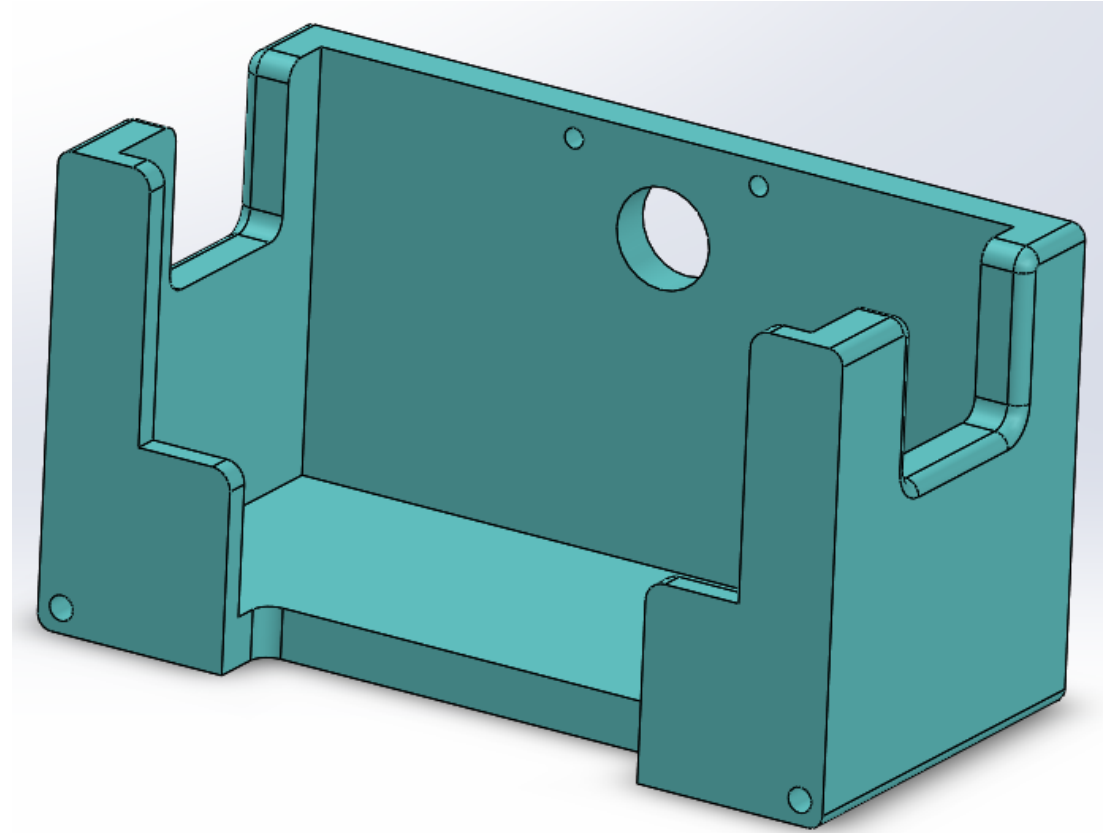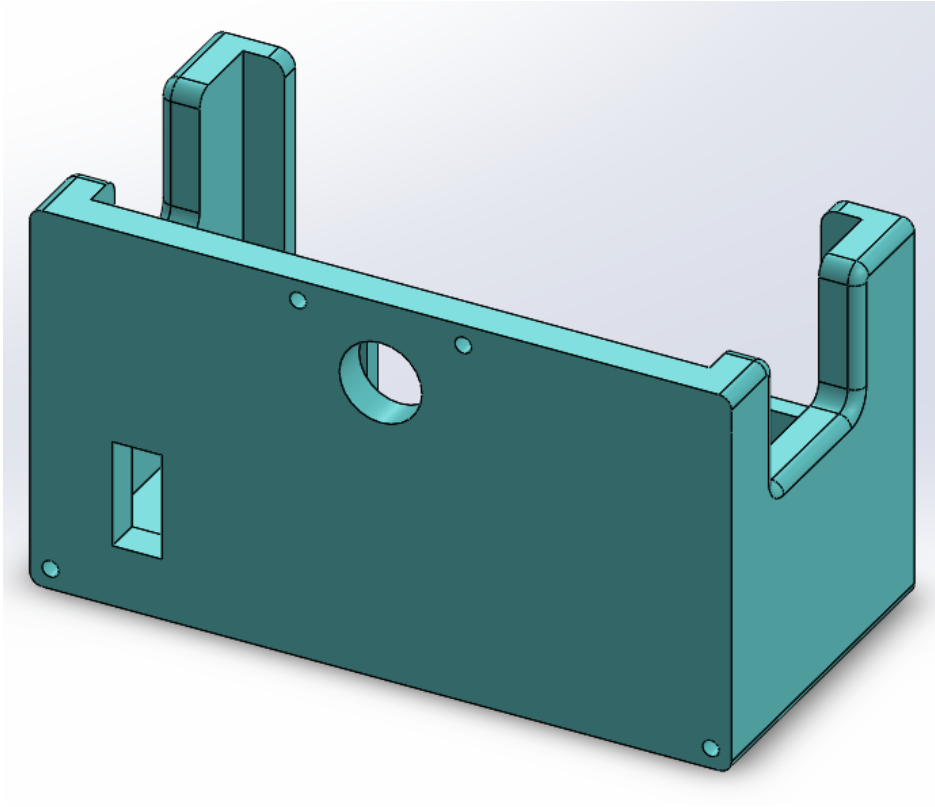**Top View**

Side View

Exploded Assembly

1. Main
2. Main Cover
3. Laser
4. Laser Cover
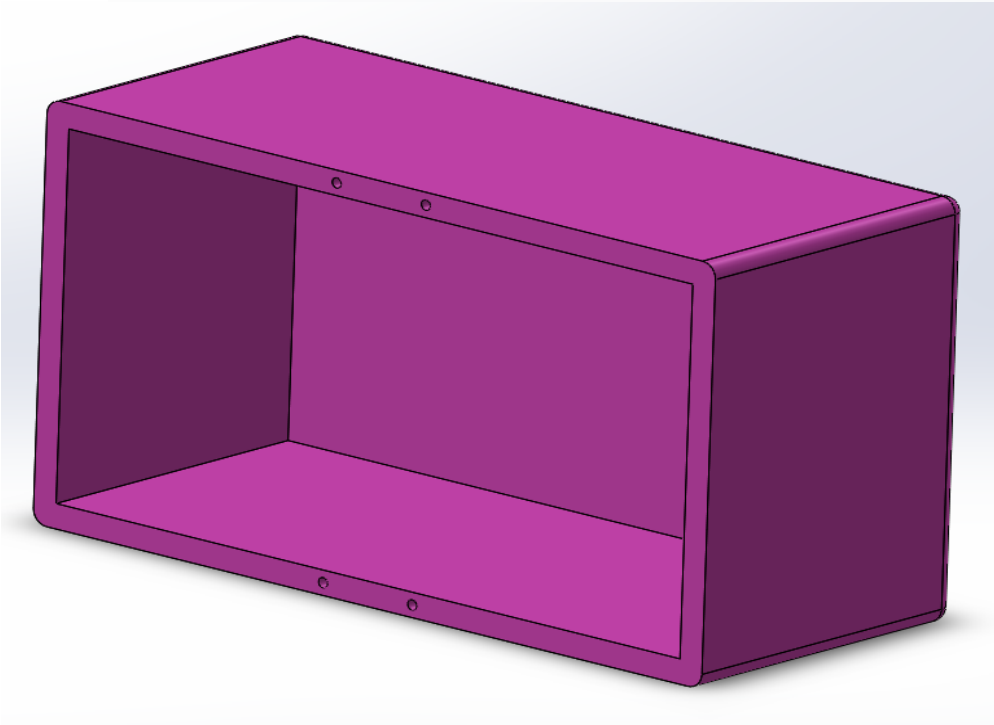5. 2nd Main
6. Camera Holder
7. Camera Cover
8. Camera

Main Unit:

2nd Main Unit:

Laser Unit:
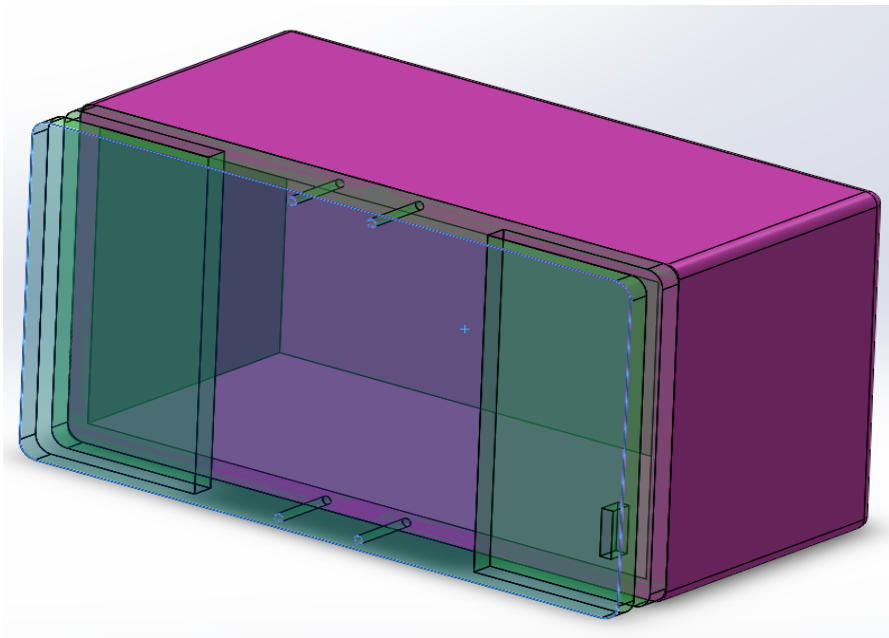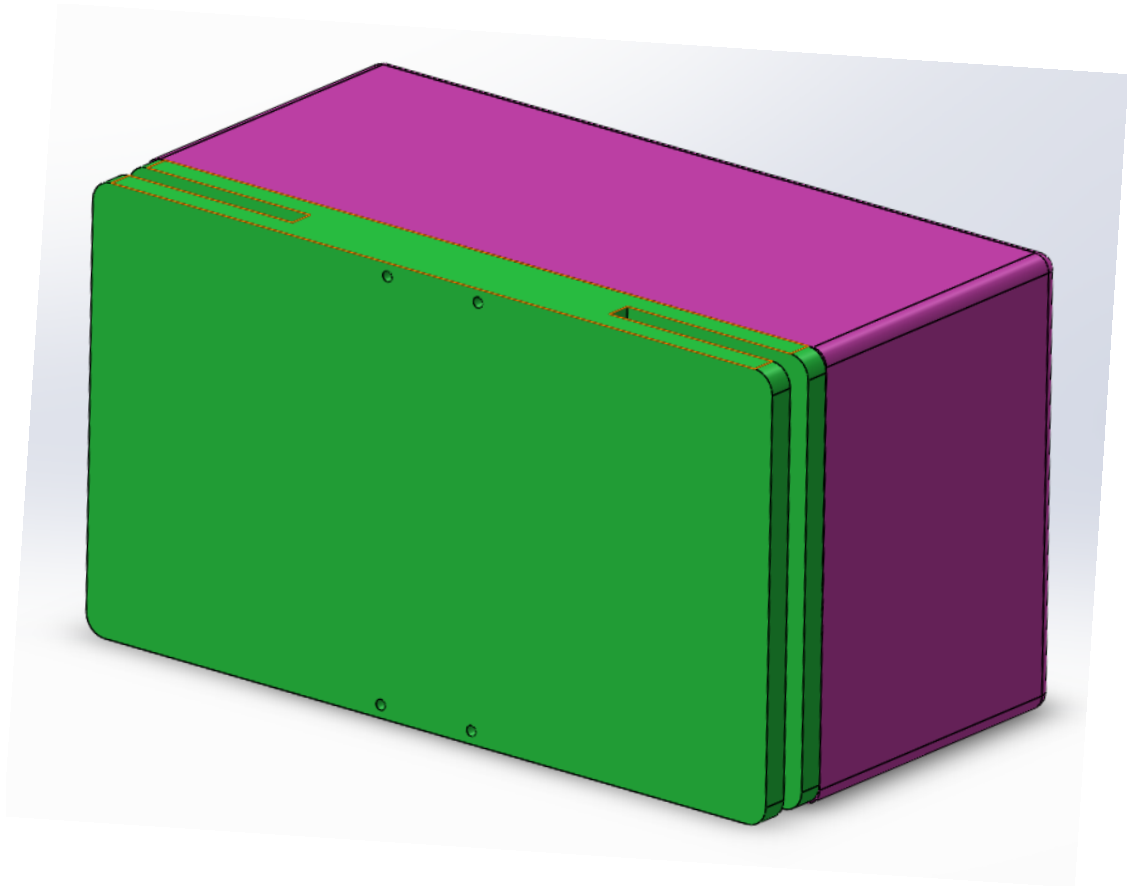
Camera Unit:
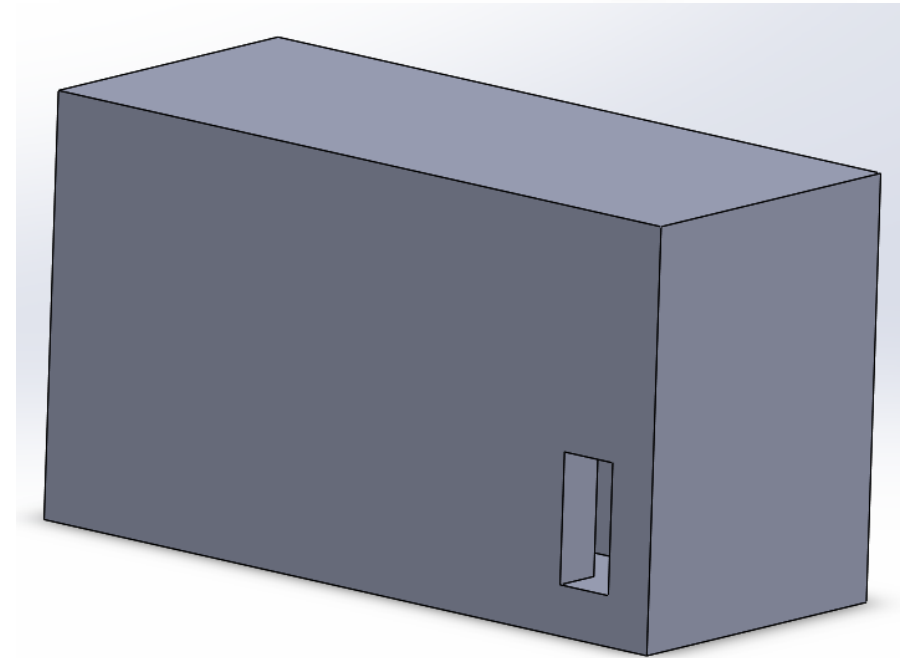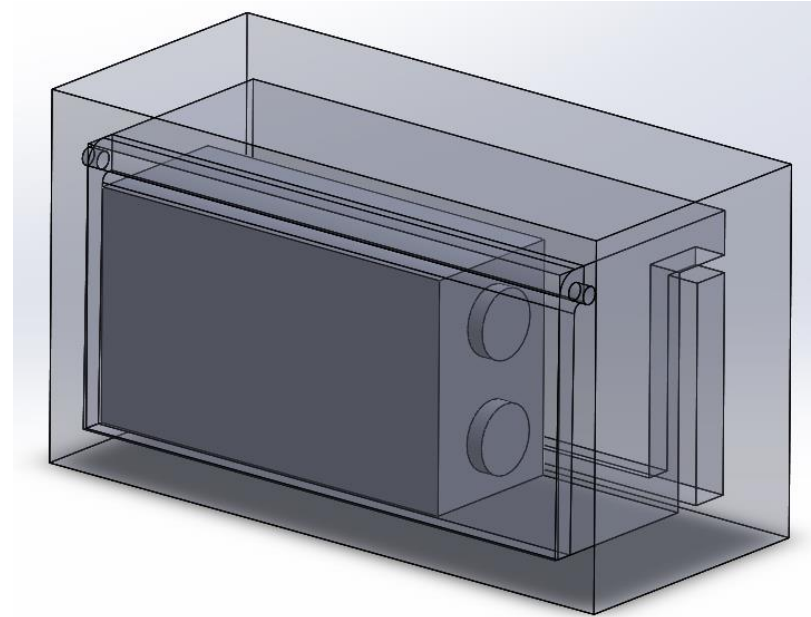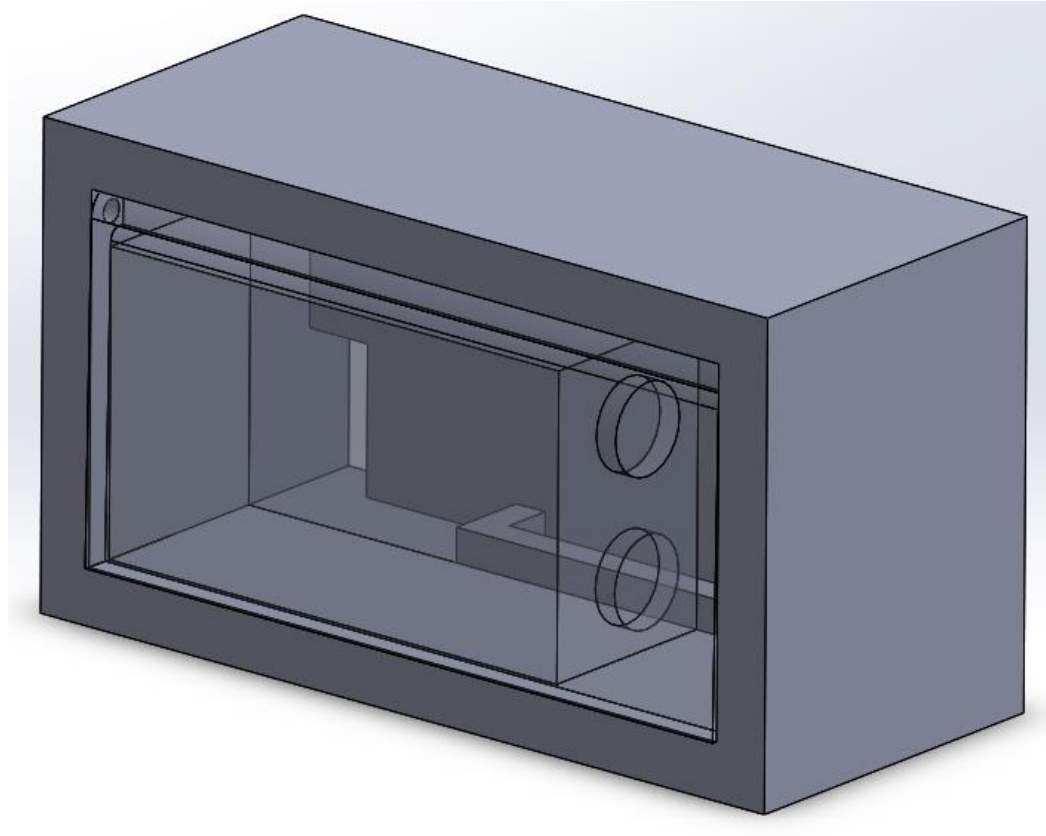
Main Unit:

Main Unit Schematic Diagram:

KY-006 Passive Buzzer

Resistor (1kΩ)

Photoresistor

VCC
KY-006

S   GND

Battery Pack (9V)

Arduino Nano (Rev3.0)

VIN   5V   3V3

RESET   D13/SCK
AREF   D12/MISO
               D11/MOSI
A0   D10
A1   D9
A2   D8
A3   D7
A4   D6
A5   D5
A6   D4
A7   D3
               D2

D1/TX   TXD
D0/RX   RXD

GND

Arduino Nano MCU

Limit Switch (Normally Closed)

ESP8266 WiFi Module

VCC
TXD   CH_PD
RXD   GPIO_0
       GPIO_2
       RSTn
GND

ESP8266 WIFI Module
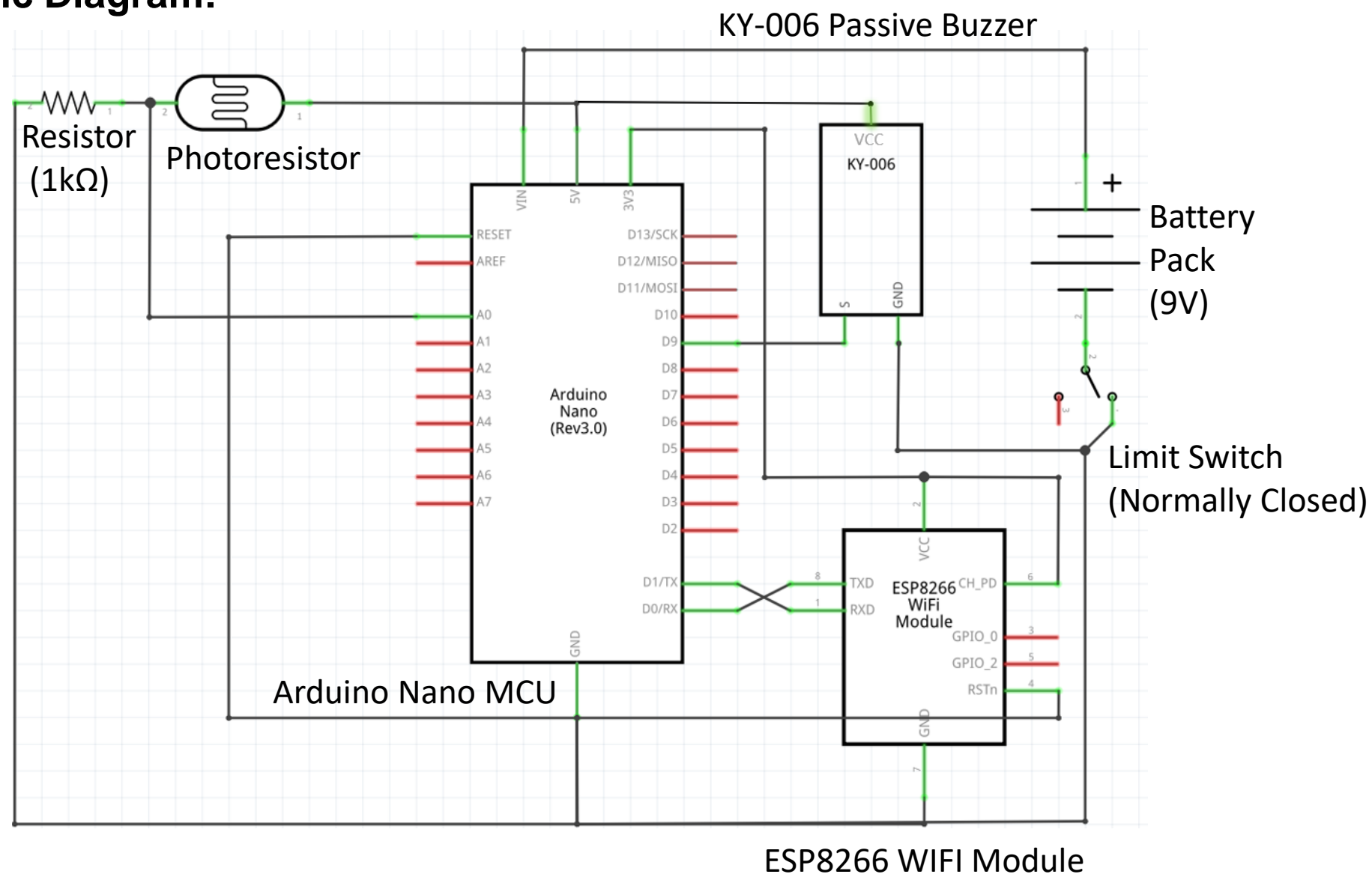
Main Unit:

Main Unit Pictorial Circuit Diagram:

KY-006 Passive Buzzer

ESP8266 WIFI Module

Arduino Nano MCU

Limit Switch (Normally Closed)

Resistor (1kΩ)

Photoresistor

Battery Pack (9V)
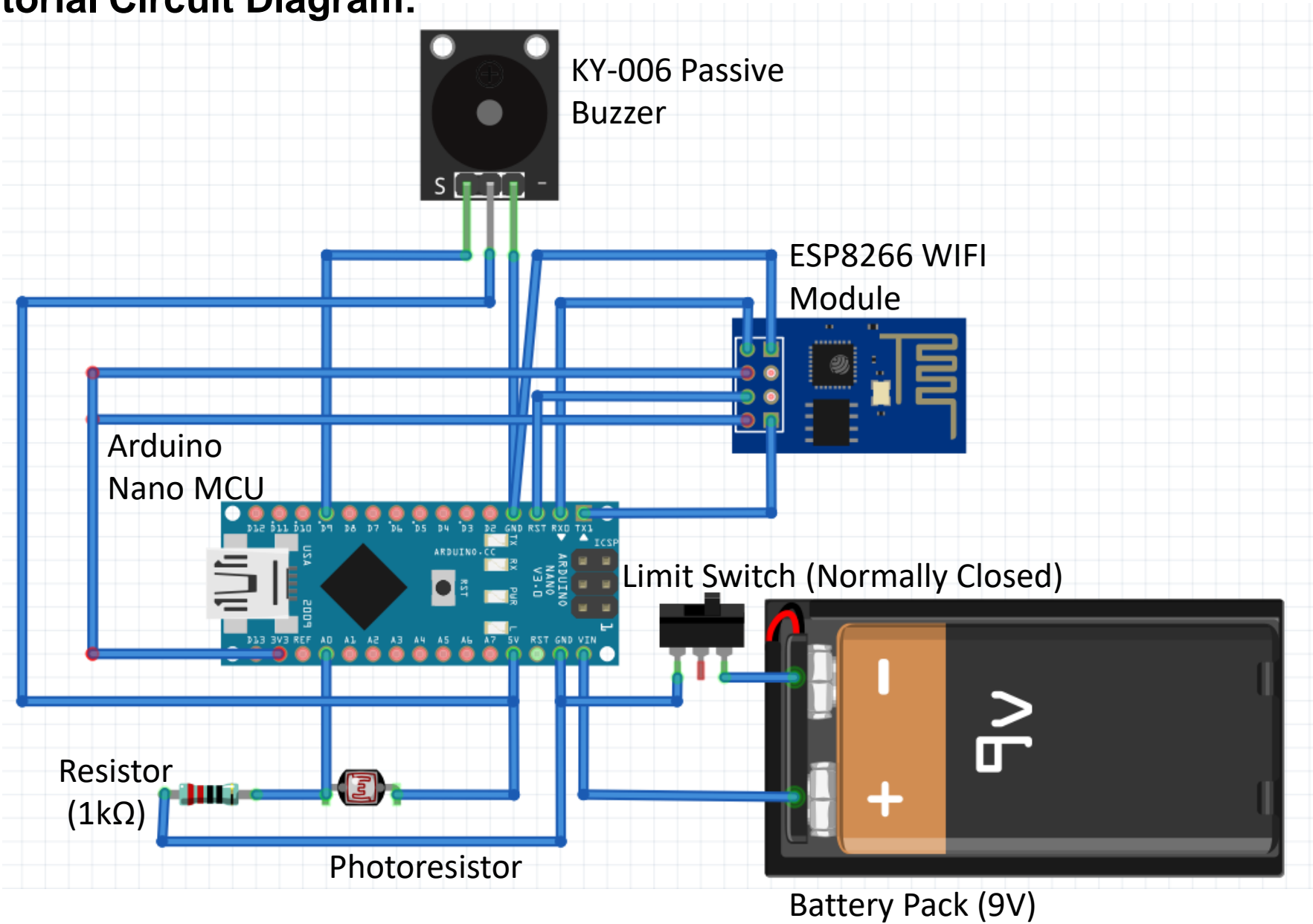
Laser Unit:

Laser Unit Schematic Diagram:

Limit Switch
(Normally Closed)

Laser Diode
(3V)

Battery Pack (3V)

Laser Unit Pictorial Circuit Diagram:

Laser Diode (3V)

Limit Switch
(Normally Closed)

AA Battery

AA Battery

Battery Pack (3V)
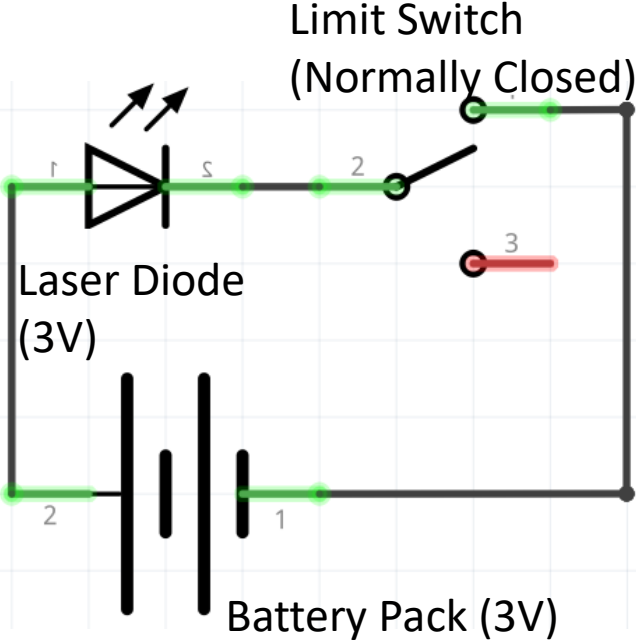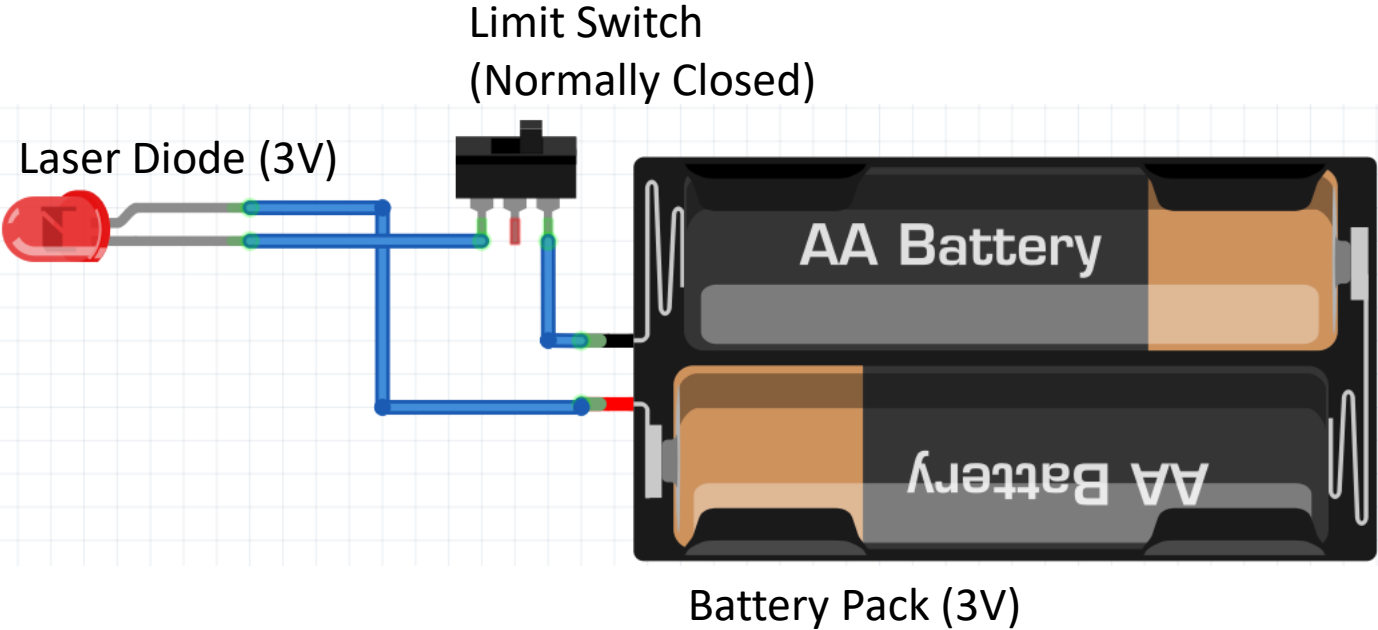
Camera Unit:

Camera Unit Schematic Diagram:
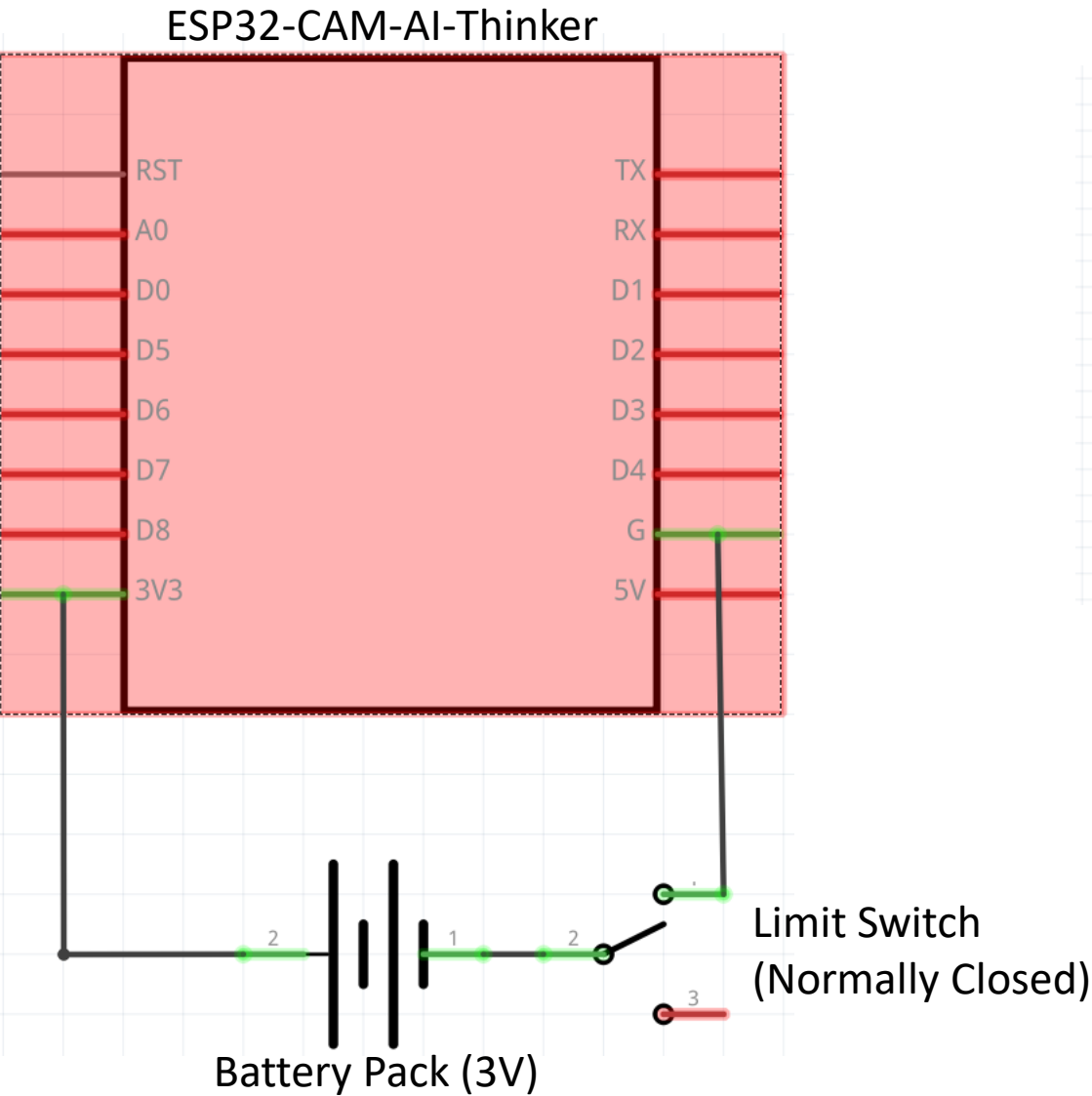
Camera Unit Pictorial Circuit Diagram:

ESP32-CAM-AI-Thinker

RST	TX
A0	RX
D0	D1
D5	D2
D6	D3
D7	D4
D8	G
3V3	5V

Limit Switch
(Normally Closed)

Battery Pack (3V)

Battery Pack (3V)

ESP32-CAM-AI-Thinker

AA Battery

AA Battery

Limit Switch
(Normally Closed)

https://www.studiopieters.nl

ESP32-CAM